

# **AVIAN INFLUENZA PREVENTION AND CONTROL IN HUNGARY**

**Detailed information about the structure and operation of the  
Hungarian veterinary authorities in the aspect of Avian Influenza  
for the United States Department of Agriculture (USDA)**

27<sup>th</sup> of July, 2008

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# **Part I: Avian Influenza Legislation and Administrative Guarantee**

## **1.1. The legislation of prevention and control of Avian Influenza**

Hungary is a member state of the European Community since 1<sup>st</sup> of May 2005. According to that all legislation of the European Community being in force are also valid in Hungary. Besides these regulations Hungary has national acts and decrees on animal health and avian influenza.

### **1.1.1. Legislation of the European Community**

- Council Directive 2005/94/EC of 20 December 2005 on Community measures for the control of avian influenza and repealing Directive 92/40/EEC
- Commission Decision No 2007/598/EC of 28 August 2007 concerning measures to prevent the spread of highly pathogenic avian influenza to other captive birds kept in zoos and approved bodies, institutes or centres in the Member States
- Commission Decision No 2007/268/EC of 13 April 2007 on the implementation of surveillance programmes for avian influenza in poultry and wild birds to be carried out in the Member States and amending Decision 2004/450/EC
- Commission Decision No 2007/183/EC of 23 March 2007 amending Decision 2005/760/EC concerning certain protection measures in relation to highly pathogenic avian influenza in certain third countries for the import of captive birds
- Commission Decision No 2007/25/EC of 22 December 2006 as regards certain protection measures in relation to highly pathogenic avian influenza and movements of pet birds accompanying their owners into the Community
- Commission Decision No 2007/24/EC of 22 December 2006 approving contingency plans for the control of avian influenza and Newcastle disease
- Commission Decision No 2007/21/EC of 22 December 2006 amending Decision 2005/760/EC as regards certain protection measures in relation to highly pathogenic avian influenza and imports of birds other than poultry into the Community
- Commission Decision No 2006/563/EC of 11 August 2006 concerning certain protection measures in relation to highly pathogenic avian influenza of subtype H5N1 in wild birds in the Community and repealing Decision 2006/115/EC
- Commission Decision No 2006/474/EC of 6 July 2006 concerning measures to prevent the spread of highly pathogenic avian influenza caused by influenza A virus of subtype H5N1 to birds kept in zoos and approved bodies, institutes and centres in the Member States and repealing Decision 2005/744/EC
- Commission Decision No 2006/437/EC of 4 August 2006 approving a Diagnostic Manual for avian influenza as provided for in Council Directive 2005/94/EC
- Commission Decision No 2006/416/EC of 14 June 2006 (and its amendments) concerning certain transitional measures in relation to highly pathogenic avian influenza in poultry or other captive birds in the Community
- Commission Decision No 2006/415/EC of 14 June 2006 (and its amendments) concerning

certain protection measures in relation to highly pathogenic avian influenza of the subtype H5N1 in poultry in the Community and repealing Decision 2006/135/EC

- Commission Decision No 2005/760/EC of 27 October 2005 concerning certain protection measures in relation to highly pathogenic avian influenza in certain third countries for the import of captive birds
- Commission Decision No 2004/402/EC of 26 April 2004 approving contingency plans for the control of avian influenza and Newcastle disease
- Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption

### **1.1.2. National legislation**

- Act on Animal Health No 176 of 2005
- Decree of the Minister of Agriculture No 143/2007. of 4 December 2007 on detailed rules of avian influenza control
- Decree of the Minister of Agriculture No 41/1997 of 28 May 1997 on Animal Health Code
- Contingency plan on avian influenza

## **1.2. Structure of the veterinary service**

### **1.2.1. Ministry of Agriculture and Rural Development**

Following a reorganisation and merger of services in 2006/2007, the Ministry of Agriculture and Rural Development (MARD) is now responsible for most official controls on food and has full responsibility in the areas of feed, animal health, animal welfare and plant protection. The Ministry of Health and the Ministry of Social Affairs and Labour have reduced functions. The Hungarian Food Safety Office has a co-ordination role and has specific tasks, including risk assessment (see Figure 1.)

Within MARD, the Department of Food Chain Safety, Animal and Plant Health was created in August 2006, bringing together animal health and welfare, plant health and food chain safety for food of both animal and non animal origin. As the Chief Veterinary Officer of Hungary became the State Secretary for Food Chain Control in March 2008, the Department was divided in two.

The Department for Food Chain Control (DFCC) comprises 4 divisions and the Department of Food Chain Development has two divisions, they are responsible for:

- Strategic planning
- Legislation
- International affairs

One of the deputy CVOs is head of DFCC which is under the responsibility of the State Secretary for Food Chain control. The head of the Plant Protection, Soil Conservation and Agri-environment Division is the Chief Plant Health Officer.

**Ministry of Agriculture and Rural Development**

**Department of Food Chain Control**

Address: H-1055 Budapest, Kossuth tér 11

Tel: + 36-1-332-7986

Fax: + 36-1-301-4669

**1.2.2. Central Agricultural Office**

Government Decree 274/2006 established the Central Agricultural Office (CAO) on 1 January 2007, with 1 central office and 19 County Agricultural Offices. The CAO is responsible for implementation of administration and controls. MARD Ministerial Instruction 11/2006 set out the rules of procedure for the CAO. Article 10 assigns an oversight role for the former MARD DFCSAPH on the CAO as regards operational issues.

The CAO is headed by a President (who reports to the Minister of MARD) and comprises three functional areas, each headed by a Vice President. One of the CAO functional areas covers "Food chain safety". The Vice President for this function is one of the Deputy CVOs.

The CAO Food chain safety function comprises 5 Directorates and an Audit Division.

In line with Government Decree 138/2007, most functions in relation to food safety which were previously exercised by agencies under the aegis of the Ministry of Health (the National Office of the Chief Medical Officers and the National Institute of Food Safety) were reallocated to the CAO with effect from 1 October 2007 together with 105 staff.

**Central Agricultural Office**

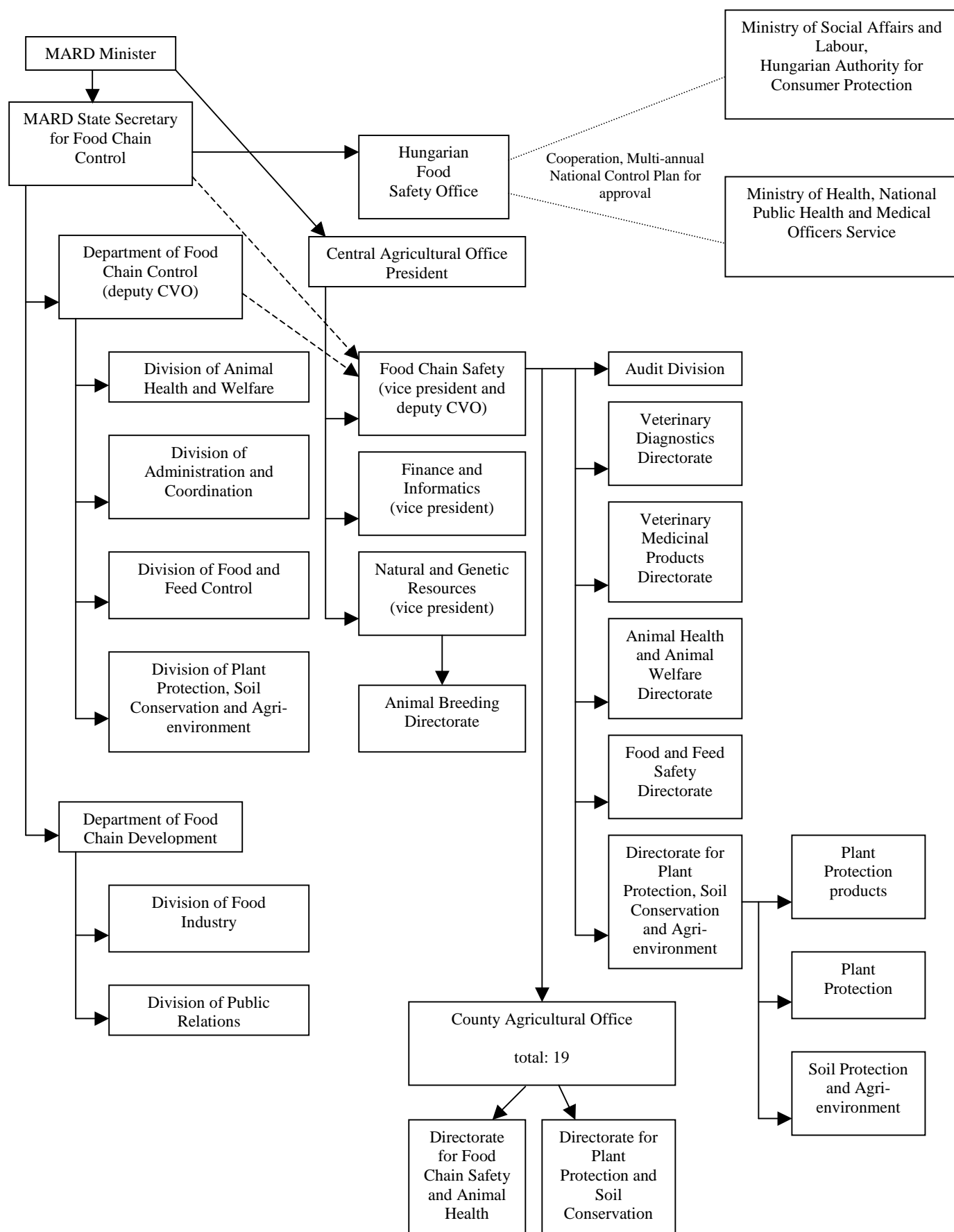
**Deputy President for Food Chain Safety**

Address: 1124 Budapest, Keleti Károly u. 24

Tel.: +36-1-336-9448

Fax: +36-1-336-9479

**Figure 1.: Overview of control authorities of food and feed safety in Hungary**



### 1.2.3. Human resources

There are 2657 operatives working in the Hungarian veterinary service (including veterinarians, assistants, engineers, pharmacists, chemists, etc.).

**Table 1.: Staffing in MARD (under the control of the State Secretary for Food Chain Control)**

Department, Unit	Division	Maximum number of staff	Filled
<b>State secretariat</b>		<b>5</b>	<b>5</b>
<b>Department of Food Chain Control</b>		<b>26</b>	<b>25</b>
	Head and Deputy Head of Department and Administrator	3	2
	Division of Animal Health and Welfare	4	4
	Division of Administration and Coordination	5	5
	Division of Food and Feed Control	5	5
	Division of Plant Protection, Soil Conservation and Agri-environment	9	8
<b>Department of Food Chain Development</b>		<b>14</b>	<b>10</b>
	Head and Deputy Head of Department	2	1
	Division of Food Industry	9	8
	Division of Public Relations	3	1
<b>Total</b>		<b>45</b>	<b>40</b>



**Table 2.: Staffing in CAO (under the control of the Vice President for Food Chain Safety)**

<b>Unit</b>	<b>Maximum number of staff</b>	<b>Filled</b>
Vice President's office	3	3
Audit Division	5	5
Directorate for Veterinary Diagnostics (including two regional laboratories at Debrecen and Kaposvár)	201	201
Directorate for Veterinary Medicinal Products	58	58
Directorate for Animal Health and Animal Welfare	21	21
Food and Feed Safety Directorate	170	170
Directorate for Plant Protection, Soil Conservation and Agri-environment	75	75
<b>Total</b>	<b>533</b>	<b>533</b>

#### **1.2.4. The duties of the national authority and local authorities**

The national authorities are responsible for:

- implementing the Community law;
- preparing new national regulations (adoption of the Commission regulations);
- contact with the OIE (World Organization for Animal Health);
- contact with the European Commission Health & Consumer Protection Directorate-General;
- data collection, analysis, strategy planning;
- coordination of the work of the local authorities (County Agricultural Office Food Chain Safety and Animal Health Directorates);
- central coordination of the control in case of an outbreak of highly pathogenic avian influenza (National Epidemiological Center);
- implementation of the surveillance plans for different animal diseases (including avian influenza);
- conducting simulation trainings on preparedness for outbreaks;
- risk assessment for the whole country according to the risk of avian influenza (ie. migration of wild birds)

The local authorities are responsible for:

- controlling that all animal keepers are working in compliance with the law (especially with the focus on the poultry holdings);
- updating all data concerning the animal health status (ie. number of animals of different species, number of holdings, etc.) and forwarding these data to the central authorities;
- local coordination of the control in case of an outbreak of highly pathogenic avian influenza (Local Epidemiological Center).

### **1.3. The obligation of the establishments where poultry and their product is produced and processed**

All establishments where poultry kept are registered by County Food Chain Safety and Animal Health Directorates. New establishments can be populated with poultry only after the registration and with the permission of these directorates.

The slaughter houses and all other premises where poultry products produced and processed are registered by Food and Feed Safety Directorate of Central Agricultural Office.

## **Part II: Measures for the Prevention and Control of Avian Influenza**

### **2.1. Measures taken to control the spread of Avian Influenza**

#### **2.1.1. Administrative measures taken in epidemic free period in Hungary**

- to keep the local and national Contingency Plans updated,
- to organize outbreak simulating trainings,
- permanent risk assessment (the main point of it is to prevent the contact between poultry (or other captive birds) and wild birds)
- completion of the accepted surveillance program.

#### **2.1.2. Measures taken in case of an outbreak of Avian Influenza**

In case of an outbreak of avian influenza all measures are taken according to the legislation in force of the European Community and Hungary, mentioned in chapter 1.1. of the Part I of this document. Basically there are administrative measures:

##### **2.1.2.1. In case of poultry holdings are affected**

Establishment of protection, surveillance and further restricted zones:

Protection zone with a radius of at least 3 kilometers around the holding.

Surveillance zone with a radius of at least 10 kilometers around the holding, including the protection zone.

(Principles of zoning:

When establishing protection and surveillance zone the following criteria were taken account of:

- (a) the epidemiological inquiry;

- (b) the geographical situation, particularly natural boundaries;
- (c) the location and proximity of holdings and the estimated number of poultry;
- (d) patterns of movements and trade in poultry, other captive birds;
- (e) the facilities and personnel available to control any movement within the protection and surveillance zones of poultry or other captive birds, their carcasses, manure, bedding or used litter, in particular if the poultry or other captive birds to be killed and disposed of have to be moved from their holding of origin.

Map of the protection zone, surveillance zone, area A and area B is shown in chapter 4.2.6. of Part IV. of this document.)

#### Measures to be applied both in the protection and in the surveillance zones

The competent authority (ie. Central Agricultural Office Animal Health and Animal Welfare Directorate) shall:

1. ensure that the following measures are applied within the protection and surveillance zones:
  - (a) arrangements are put in place which permit the tracing of anything likely to spread the avian influenza virus including poultry, other captive birds, meat, eggs, carcasses, feed, litter, people who have been in contact with the infected poultry or other captive birds or vehicles with a link to the poultry industry;
  - (b) owners are to provide the competent authority, on request, with any relevant information concerning the poultry or other captive birds and eggs entering or leaving the holding;
2. take all reasonable steps to ensure that all persons in the protection and surveillance zones affected by the restrictions concerned are fully aware of the restrictions in place;
3. where epidemiological information or other evidence indicates, implement a preventive eradication programme, including preventive slaughtering or killing of poultry or other captive birds, in holdings and areas at risk;
4. immediately inform the European Commission, and the Commission shall review the situation as soon as possible.

#### Measures to be applied in protection zones

1. census of all the holdings as soon as possible;
2. all commercial holdings are visited by an official veterinarian as soon as possible for a clinical examination of the poultry and other captive birds and, if necessary, the collection of samples for laboratory tests in accordance with the diagnostic manual; a record of such visits and the findings thereof shall be kept; non-commercial holdings are visited by an official veterinarian before the lifting of the protection zone;
3. additional surveillance is immediately implemented in accordance with the diagnostic manual in order to identify any further spread of avian influenza in the holdings located in the protection zone;

4. all poultry and other captive birds are brought inside a building on their holding and kept there. Where this is impractical or if their welfare is compromised, they are confined in some other place on the same holding such that they do not have contact with other poultry or other captive birds on other holdings. All reasonable steps are taken to minimise their contact with wild birds;
  5. carcasses are disposed of as soon as possible;
  6. vehicles and equipment used for transporting live poultry or other captive birds, meat, feed, manure, slurry and bedding and any other material or substances likely to be contaminated, undergo without delay one or more of the procedures of cleansing and disinfection;
  7. all parts of vehicles used by staff or other persons which enter or leave holdings and are likely to have become contaminated undergo without delay one or more of the procedures of cleansing and disinfection;
  8. no poultry, other captive birds or domestic mammals may enter or leave a holding without authorisation of the competent authority. This restriction shall not apply to mammals which have access only to the living areas for humans;
  9. any increased morbidity or mortality or significant drop in production data in holdings is immediately reported to the competent authority, which shall carry out appropriate investigations in accordance with the diagnostic manual;
  10. any person entering or leaving holdings observes appropriate biosecurity measures aimed at preventing the spread of avian influenza;
  11. records of all persons visiting holdings, except dwellings, are kept by the owner in order to facilitate disease surveillance and control and must be made available upon request by the competent authority. Such records do not have to be kept where the visitors are to holdings such as zoos and wildlife parks where they have no access to the areas where the birds are kept;
  12. the removal or spreading of used litter, manure or slurry from holdings in protection zones are prohibited, unless authorised;
  13. fairs, markets, shows or other gatherings of poultry or other captive birds are prohibited in protection zones;
  14. poultry or other captive birds for restocking of game are not released in protection zones;
  15. prohibition on the movement and transport of birds, eggs, poultry meat and carcasses.
- Note: In special cases – described in the Council Directive 2005/94/EC – derogations are allowed.

#### **2.1.2.2. In case of wild birds are affected**

Establishment of control and monitoring areas

Control area with a radius of at least 3 kilometres.

Monitoring area with a radius of initially at least 10 kilometres, including the control area.

Derogations from measures mentioned above:

1. the country may refrain from the establishment of control and monitoring areas on basis of the favourable results of a risk assessment by the competent authority (see above);
2. on the basis of favourable results to a risk assessment the control area may be:
  - (a) amended to an area of sufficient size but in any event not less than of 1 km in radius; or
  - (b) established as a band of 1 km in width from the banks of a river or the shores of a lake or coast for a length of at least 3 km.

#### Measures to be applied in the control area

1. identification of all commercial poultry holdings and non-commercial holdings;
2. implementation of the biosecurity measures laid down in Commission Decision 2005/734/EC for poultry and other captive birds, including disinfection at the entrances and exits to premises where poultry or other captive birds are kept;
3. intensified official surveillance of wild bird populations, in particular water fowl, and further monitoring for dead or sick birds, if necessary with the co-operation of hunters and bird-watchers, and the reporting of dead bird findings to the competent authority and the removal, as far as possible, of carcasses of dead birds by personnel who have been specifically instructed on measures to protect themselves from infection with the virus and to prevent the spread of the virus to susceptible animals;
4. campaigns to inform the public and to increase disease awareness among owners of poultry or other captive birds, hunters, bird-watchers and those providing the services of water-related recreation;
5. periodic and documented visits to all commercial poultry holdings and targeted visits to non-commercial poultry holdings, prioritising those considered to be at greater risk, which must include:
  - a clinical inspection of the poultry or other captive birds including, if necessary, the collection of samples for laboratory examination targeting poultry or other captive birds that had not been confined prior to the positive finding in a wild bird and in particular ducks and geese;
  - an assessment of the implementation of the biosecurity measures.

#### Prohibitions in the control area

The following are prohibited in the control area:

1. the removal of poultry or other captive birds from the holding on which they are kept;
2. the assembly of poultry or other captive birds at fairs, markets, shows or other gatherings;
3. the transport through the control area of poultry or other captive birds, except transit through the control area by road or rail without unloading or stopping;

4. the dispatch of hatching eggs collected from holdings which on the date of collection were situated in the control area;
5. the dispatch from the control area of fresh meat, minced meat, meat preparations and meat products from poultry originating from the control area and wild feathered game taken from the wild in that area;
6. the transport or spread of unprocessed manure from holdings of poultry or other captive birds within the control area, except the transport for treatment in accordance with Regulation (EC) No 1774/2002;
7. the dispatch to other Member States of the European Union and third countries of animal by-products of avian origin derived from poultry or other captive birds or wild feathered game originating from the control area;
8. the hunting of wild birds or otherwise taking them from the wild, unless authorized by the competent authority for specific purposes;
9. the release of game birds from captivity into the wild.

#### Measures to be applied in the monitoring area

At least the measures described in point 1-4 in the section „Measures to be applied in the control area” shall be applied in the monitoring area.

#### Prohibitions in the monitoring area

The following are prohibited in the monitoring area:

1. the removal of poultry or other captive birds out of the monitoring area for the first 15 days following the date of establishment of that area;
2. the assembly of poultry or other captive birds at fairs, markets, shows or other gatherings;
3. the hunting of wild birds or otherwise taking them from the wild, unless authorized by the competent authority for specific purposes;
4. the release of game birds from captivity into the wild.

Note: In special cases – described in the Commission Decision No 2006/563/EC – derogations are allowed.

#### **2.1.2.3. Stamping-out policy**

In Hungary the stamping-out policy is applied in the following cases:

- If the laboratory results prove that the samples taken from poultry suspected of being infected with the virus of HPAI are positive, all the birds living in the affected flock(s)/holding(s) shall be destroyed according to the legislation in force.
- According to the risk assessment a preventive eradication can be made with a radius of 1 kilometer from the place of the outbreak. In the aim of:
  - a) decreasing the number of sensitive animals in the territory

- b) preventing from / decreasing the virus excretion

Note: The carcasses shall be processed according to the Regulation (EC) No. 1774/2002.

### **2.1.3. Vaccination of poultry against Avian Influenza**

In Hungary the use of any type of vaccines against the virus of avian influenza in poultry is prohibited.

### **2.1.4. Early-warning and emergency response for Avian Influenza**

Due to the recent outbreaks in Hungary the whole state and private veterinary service pays big attention to any signs of a suspicion of the infection with the virus of HPAI. The state veterinary officers make the risk assessment permanently especially in regions which were involved in an earlier outbreak. The main point of the risk assessment is to prevent the contact between poultry (or other captive birds) and wild birds.

There were several official statements published to help poultry keepers in the protection of the animals from the infection (these are permanently amended according to the new legislation):

1. Official statement of the Department of Animal Health and Food Control of the Ministry of Agriculture and Rural Development No 79993/2005 laying down biosecurity measures to reduce the risk of transmission of highly pathogenic avian influenza caused by Influenza virus A subtype H5N1 from birds living in the wild to poultry and other captive birds and providing for an early detection system in areas at particular risk
2. Official statement of the Department of Animal Health and Food Control of the Ministry of Agriculture and Rural Development No 53152/2006 on the reduce the risk of infection with the virus of HPAI in the domestic waterfowl

Except the official statements all updated news concerning the avian influenza can be read on the official website of the Ministry of Agriculture and Rural Development: [www.fvm.hu](http://www.fvm.hu).

Every measures to be taken as emergency response for the Avian Influenza are described in the local and national Contingency Plans which are permanently updated.

### **2.1.5. Exercise of prevention and control of Avian Influenza**

To exercise the prevention and control of Avian Influenza there are outbreak simulating trainings organized from time to time locally by the County Agricultural Office Food Chain Safety and Animal Health Directorates, nationwide by the Animal Health and Animal Welfare Directorate of the Central Agricultural Office.

## **Part III: Laboratory and Technical Support**

### **3.1. National and central reference laboratory**

For the whole territory of Hungary only the National Reference Laboratory (NRL) is qualified to do the diagnosis of Avian Influenza, which is the Veterinary Diagnostic Directorate of the Central Agricultural Office (before 1<sup>st</sup> of January 2007: Central Veterinary Institute):

Contact details:

Name: Állategészségügyi Diagnosztikai Igazgatóság (Veterinary Diagnostics Directorate)  
Address: 1149 Budapest, Tábornok u. 2., Hungary  
Mailing Address: 1581 Budapest, 146. Pf. 2., Hungary  
Tel.: +36 1 460 6300  
Fax: +36 1 252 5177  
E-mail: titkarsag@oai.hu

The positive samples (both virological and serological) are sent to the Central Reference Laboratory for Avian Influenza of the European Union (CRL) for further investigations:

Contact details:

Name: Veterinary Laboratories Agency (VLA), Weybridge  
Address: New Haw, Addlestone, Surrey, KT15 3NB, United Kingdom  
Telex: 262318 Vet Wey G  
Tel.: +44(0)1932 341111  
Fax: +44(0)1932 347046  
E-mail: enquiries@vla.defra.gsi.gov.uk

### **3.2. Total number and allocation in different laboratories of professionals engaged in Avian Influenza diagnosis and testing, and their education and training status**

In the Veterinary Diagnostics Directorate (NRL) of the Central Agricultural Office basically 3 laboratories are involved in the diagnosis of the Avian Influenza:

#### **1. Laboratory of Poultry Diseases:**

5 professionals: 2 veterinarians (with university degree)  
2 laboratory technicians (with high school degree)  
1 laboratory assistant (with high school degree)

#### **2. Laboratory of Molecular Biology:**

6 professionals: 1 veterinarian (with university degree)  
2 biologists (with university degree)  
1 laboratory technician (with high school degree)  
1 laboratory assistant (with high school degree)



### 3. Laboratory of Poultry Virology:

4 professionals:        2 veterinarians (with university degree)  
                                 2 laboratory assistants (with high school degree)

## Part IV: Detailed parameters of the two Avian Influenza outbreaks in poultry in Hungary and their eradication

There were two epidemics caused by the virus of the highly pathogenic avian influenza (HPAI) in poultry in Hungary. One in June-July of 2006 and one at the end of January 2007.

### 4.1. Avian Influenza epidemic in waterfowl in Hungary from 3rd of June 2006 to 12th of July 2006

**Table 3.: List of outbreaks from 3<sup>rd</sup> of June 2006 to 12<sup>th</sup> of July 2006**  
(in accordance with the Final Report on the Avian Influenza Epidemic in Waterfowl in Hungary – dated 30 August 2006)

N u m	Cou nty	Location	GEO of holding						Species	No. of poultry kept	Date of first suspect or sample taking	Clinical signs	Date of stamping out	Laboratory results
			LAT (N)			LON (E)								H5 positive
1	BKK	Bodoglár	46	31	23	19	38	42	geese	3000	03/06/2006	yes	07/06/2006	09/06/2006
2	BKK	Bodoglár	46	31	8	19	37	52	ducks	28000	10/06/2006	yes	10/06/2006	16/06/2006
3	BKK	Bodoglár	46	31	8	19	37	52	ducks	15000	10/06/2006	yes	10/06/2006	16/06/2006
4	BKK	Móricgát	46	37	16	19	39	22	ducks	110	10/06/2006	no	10/06/2006	16/06/2006
5	BKK	Móricgát	46	37	16	19	39	22	ducks	120	10/06/2006	no	10/06/2006	16/06/2006
6	BKK	Móricgát	46	37	16	19	39	22	ducks	126	10/06/2006	no	10/06/2006	16/06/2006
7	BKK	Szank	46	32	31	19	40	52	ducks	19000	10/06/2006	no	10/06/2006	16/06/2006
8	BKK	Szank	46	33	36	19	42	36	geese	2400	16/06/2006	yes	17/06/2006	
9	BKK	Külsőgalambos	46	36	43	19	47	31	geese	580	19/06/2006	yes	19/06/2006	30/06/2006
10	BKK	Petőfiszállítás	46	36	29	19	47	56	geese	3773	20/06/2006	yes	20/06/2006	30/06/2006
11	BKK	Kiskunmajsa	46	29	53	19	43	26	geese	140	20/06/2006	yes	20/06/2006	05/07/2006
12	BKK	Bodoglár	46	31	5	19	40	12	ducks	10000	21/06/2006	yes	21/06/2006	23/06/2006
13	BKK	Bodoglár	46	29	31	19	41	13	ducks	18700	26/06/2006	yes	26/06/2006	27/06/2006
14	BKK	Kiskunmajsa	46	32	23	19	43	59	ducks	10625	28/06/2006	yes	28/06/2006	30/06/2006
15	BKK	Kiskunmajsa	46	26	53	19	47	24	geese	1800	28/06/2006	yes	28/06/2006	29/06/2006
16	BKK	Jászszerklászló	46	35	20	19	47	6	geese	340	29/06/2006	yes	29/06/2006	04/07/2006
17	BKK	Bodoglár	46	30	4	19	41	49	geese	2987	03/07/2006	yes	03/07/2006	10/07/2006
18	BKK	Bodoglár	46	30	7	19	41	20	geese	3000	29/06/2006	no	04/07/2006	03/07/2006
19	BKK	Jászszerklászló	46	34	59	19	46	16	geese	3500	03/07/2006	yes	03/07/2006	10/07/2006
20	BKK	Kiskunmajsa	46	31	23	19	43	5	geese	22600	30/06/2006	no	06/07/2006	10/07/2006
21	BKK	Kiskunmajsa	46	30	43	19	43	5	misc.	102	09/07/2006	yes	09/07/2006	14/07/2006
22	BKK	Bodoglár	46	31	12	19	38	2	ducks	27153	K+S	no	13/06/2006	28/06/2006
23	BKK	Bodoglár	46	31	5	19	39	18	ducks	6155	K+S	no	13/06/2006	20/06/2006
24	BKK	Bodoglár	46	29	56	19	39	11	ducks	32000	K+S	no	20/06/2006	29/06/2006
25	BKK	Bodoglár	46	30	58	19	40	44	ducks	10000	K+S	no	24/06/2006	29/06/2006
26	BKK	Bodoglár	46	31	16	19	38	46	ducks	33768	K+S	no	14/06/2006	29/06/2006
27	BKK	Kiskunmajsa	46	29	24	19	43	16	geese	245	K+S	no	24/06/2006	29/06/2006
28	BKK	Petőfiszállítás	46	36	29	19	48	58	ducks	3000	12/07/2006	yes	13/07/2006	20/07/2006
29	BKK	Bodoglár	46	29	49	19	39	14	geese	5361	09/07/2006	yes	09/07/2006	26/07/2006

BKK: County Bács-Kiskun

## **4.2. Avian Influenza epidemic in geese in Hungary from 21st of January 2007 to 25th of January 2007**

In this chapter the whole content of the Final Report On The Avian Influenza Outbreak In Geese in Hungary (12 March 2007) is presented.

### **4.2.1. Summary**

The Hungarian Veterinary Services identified 2 outbreaks of highly pathogenic avian influenza subtype H5N1 in geese in county Csongrád between 21 January and 26 January 2007. Stamping out of 10422 poultry in 5 holdings carried out. Details are presented in the chronology.

As a result of early detection and immediate implementation of animal health measures included in Community legislation, the spreading of the virus to the other area of county Csongrád as well as to other county of Hungary or to other Member States could be prevented.

The source of the infection is not known yet. The Community Reference Laboratory on HPAI VLA Weybridge declared the Hungarian strain to reveal high similarity to viruses isolated from wild birds in Northern Europe in early 2006 and to the virus isolated in Suffolk in UK. The epidemic investigation did not find direct link between the outbreaks. It is possible that an as yet unidentified common source could have been involved.

Since 26 January screening of the holdings showed the absence of the disease in all flocks in the affected region. Therefore the protection and surveillance zones were lifted on 19 February and 5 March. As Commission Decision 2006/415/EC (as amended by 2007/128/EC) defined the territories of area “A” and “B” and arranged for the duration of the restrictive measures in the said areas, those measures have been lifted on 12 March 2007.

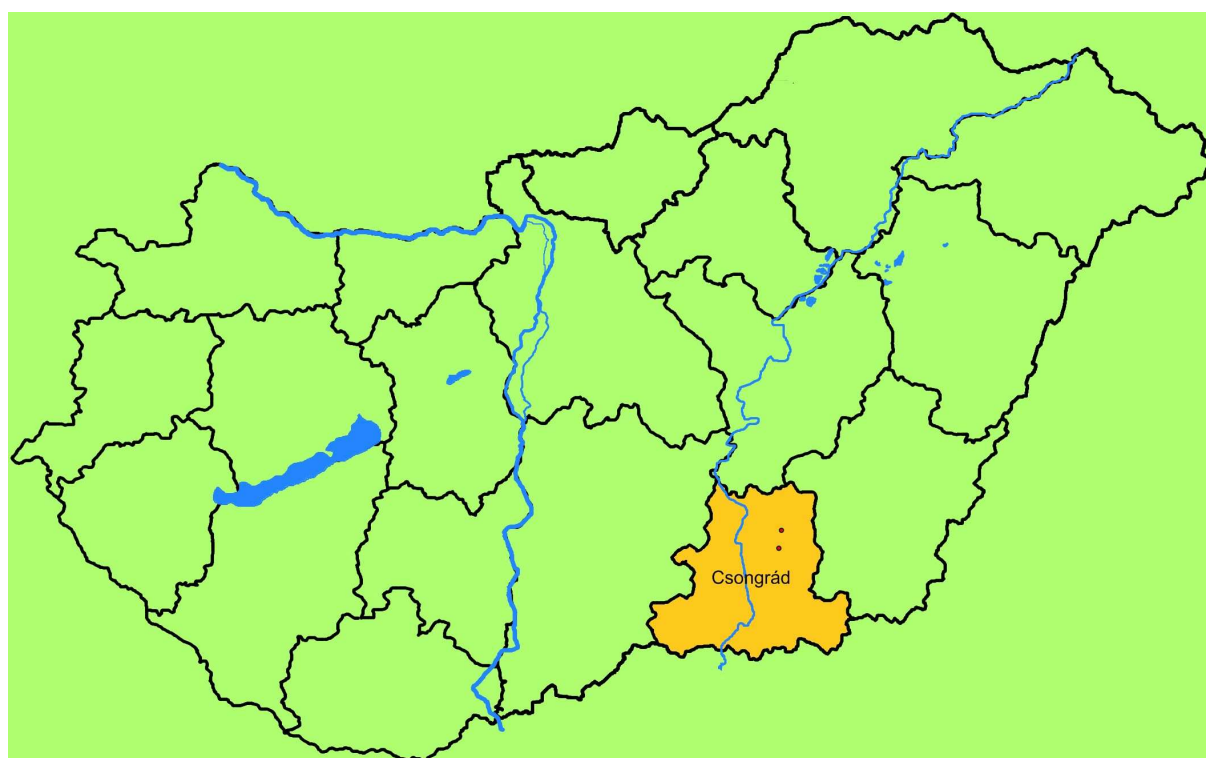
### **4.2.2. Affected area**

The current epidemic of highly pathogenic avian influenza affected one county of Hungary. The affected county Csongrád lies in the South of Hungary (see below) and has high number of commercially kept waterfowl, mainly ducks and geese.

Waterfowl are kept for various purpose including breeding, fattening and forced feeding. Flocks are owned by large companies (integrators) and are placed onto the holdings for rearing and fattening.

Waterfowl on high scale farms are kept indoor or under nest. Watering and feeding is done only indoor.

**Figure 2.: Map of the locations of the outbreaks of Avian Influenza**



**Table 4.: Location and details of the outbreaks**

Location	LAT (N)	LON (E)	No of poultry	Species	Notification	Confirmation
Szentese-Lapistó, Derekegyházi oldal 33.	46°36'32"	20°24'20"	3298	geese	21. Jan.	24. Jan.
Derekegyház, Ördögös 141	46°32'26"	20°20'32"	9386	geese	25. Jan.	30. Jan

#### 4.2.3. Laboratory investigation

All samples taken before and during the epidemic were transported by courier to the Veterinary Diagnostic Directorate of Central Agricultural Office (former Central Veterinary Institute) for laboratory testing.

Serological testing of the blood samples were done by the haemagglutination-inhibition method for avian influenza subtypes H5 and H7. Swab samples were tested by molecular biological methods including RT and RRT PCR. Dead birds collected and sent in to the laboratory underwent routine post-mortem inspection including pathohistology.

Virus isolates were sent to the Community Reference Laboratory for Avian Influenza to the Veterinary Laboratories Agency, Weybridge, United Kingdom for further specification of the virus.

Tests performed by the CRL showed high similarity to viruses isolated from wild birds in Northern Europe in early 2006:

A/whooper swan/Scotland/1430/06

#### **4.2.4. Surveillance carried out in the affected area**

During the avian influenza epidemic in Hungary, samples were taken from both poultry and wild birds in the affected area. Sample taking was performed mostly in protection and surveillance zone. Some sample come from area B as well. During the epidemiological investigation and monitoring, blood and cloacal, tracheal swabs were taken and sent to the Veterinary Diagnostic Directorate.

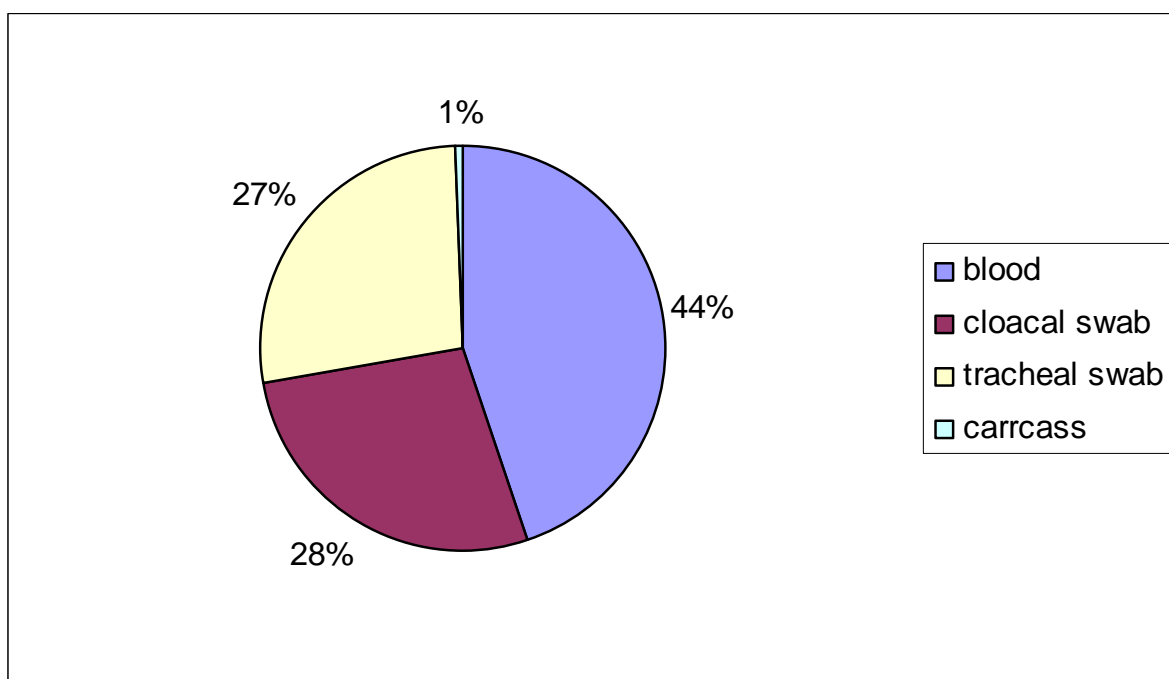
Serological testing with the haemagglutination-inhibition test with 4 reference antigens (H5N2, H5N7, H7N1, H7N7) were carried out.

Virus isolation from swabs and carcasses was performed using 9-11 days old embryonated incubated eggs.

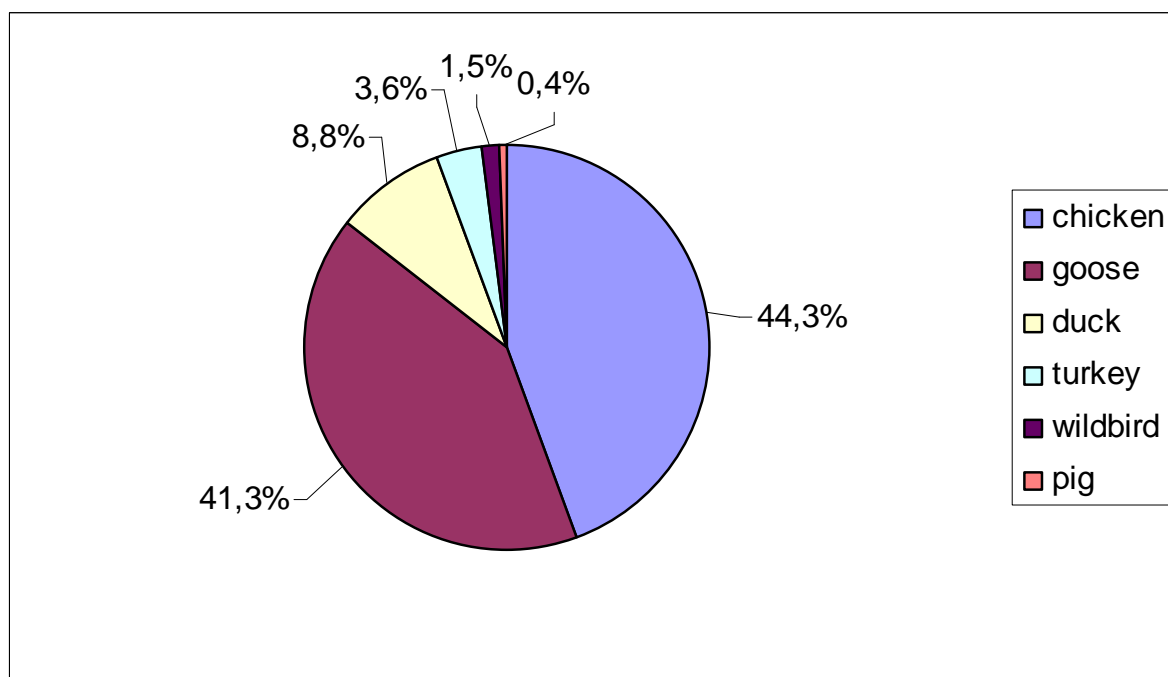
Molecular biological testing (PCR) was performed with the general influenza A primer M-gene (M +25, M-124 and M +64 probe) and using H5, H7 and N1 primers (VLA protocol, 2006). Positive isolates were subject to further sequencing.

In the timeframe between 22 January and 10 March 2007, the Veterinary Diagnostic Directorate received and tested 1265 cloacal, 1244 tracheal swab samples, 2041 blood samples and 24 carcasses. Also two backyard holdings keeping pigs were sampled in the protection zone with negative results.

**Figure 3.: Type of samples examined**



**Figure 4.: Origin of samples examined**



#### **4.2.5. Co-operation with public health services – influenza pandemic prevention**

Co-operation between both animal and public health services as well as other ministries (nature conservation, customs etc.) has been supported by regular meetings of the National Influenza Pandemic Prevention Committee. The Committee is chaired by the Chief Veterinary and Medical Officers and is supported by their relevant Ministers. The Committee serves as an important forum for the exchange of information and future planning of joint actions. Minutes of meetings are forwarded to the Government Cabinet.

#### **4.2.6. Chronology of the events**

##### **21 January**

The owner of the Kolos-Agro CoLt. large scale geese farm (of 3355 geese on 19 January ) notified the local animal health authority that in the morning there were 11 dead bodies on the farm. Afternoon other 7 geese were died. These 18 dead geese were considered to be significantly raised mortality comparing with the data of the last previous two days (2 and 8 cadavers).

On the spot visit was carried out by official veterinarians. The official veterinarians carried out post mortem examinations and diagnosed clinical signs of damaged nervous system on 30-40 animals. The on the spot visit confirmed the suspect of HPAI.

##### **22 January**

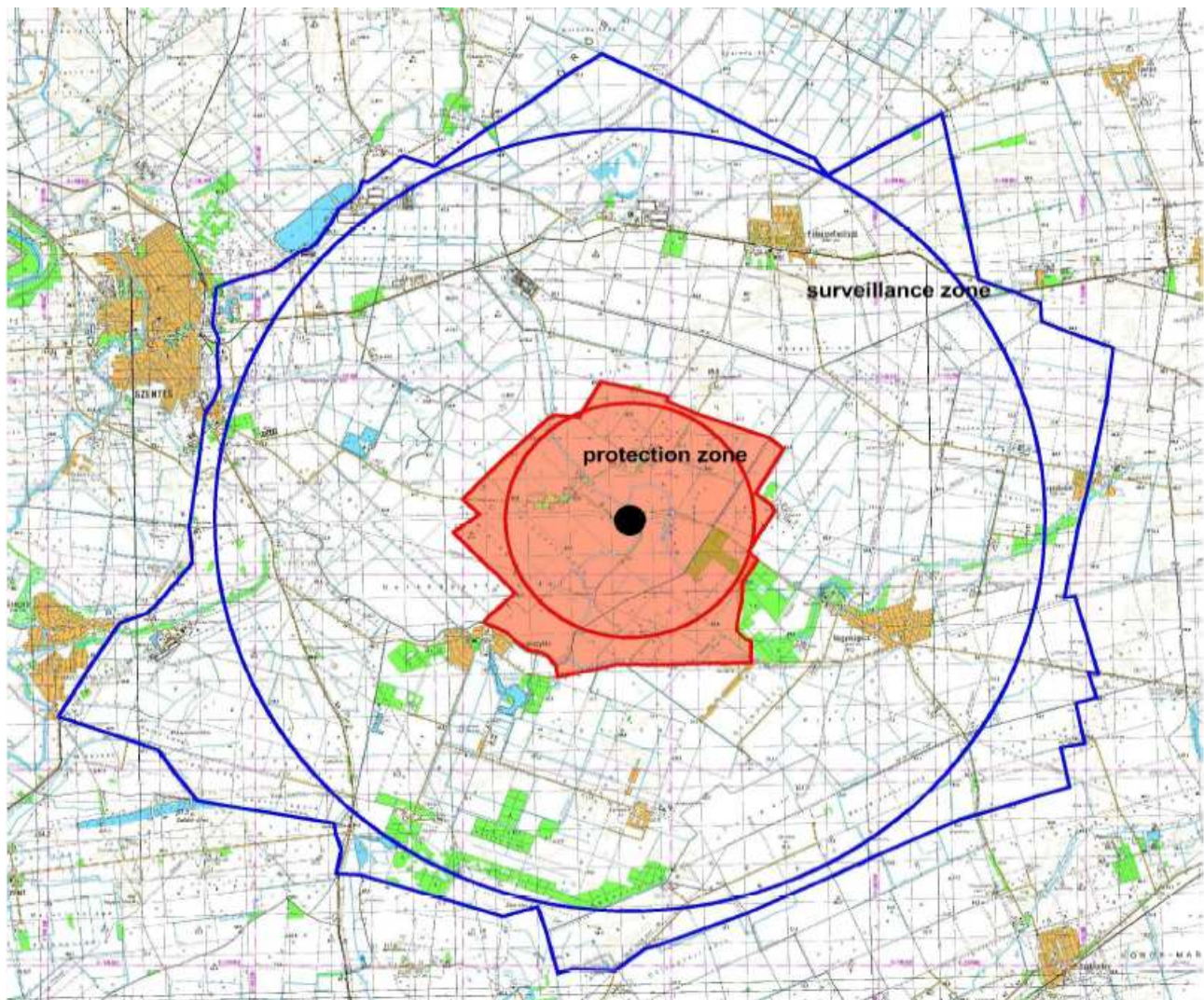
The mortality showed consistent rise. There were 29 dead bodies this morning. Afternoon 33 birds were died.

5 carcasses were sent to the Diagnostic Directorate of the Central Agricultural Office (former CVI, Budapest), the National Reference Laboratory (NRL)

Official suspicion was established simultaneously protection and surveillance zone was established. The two zones together considered to be a high risk area: “zone A”. Census and surveillance and also the epidemiological enquiry were started.

To prevent the spread of the virus the stamping out of the whole flock was started. There were no any other flocks in the near area.

The Commission of the European Union was notified.



## 23 January

The stamping out was finished, 3.265 geese were culled. All carcasses were disposed by ATEV processing plant. The preliminary cleaning and disinfection were started.

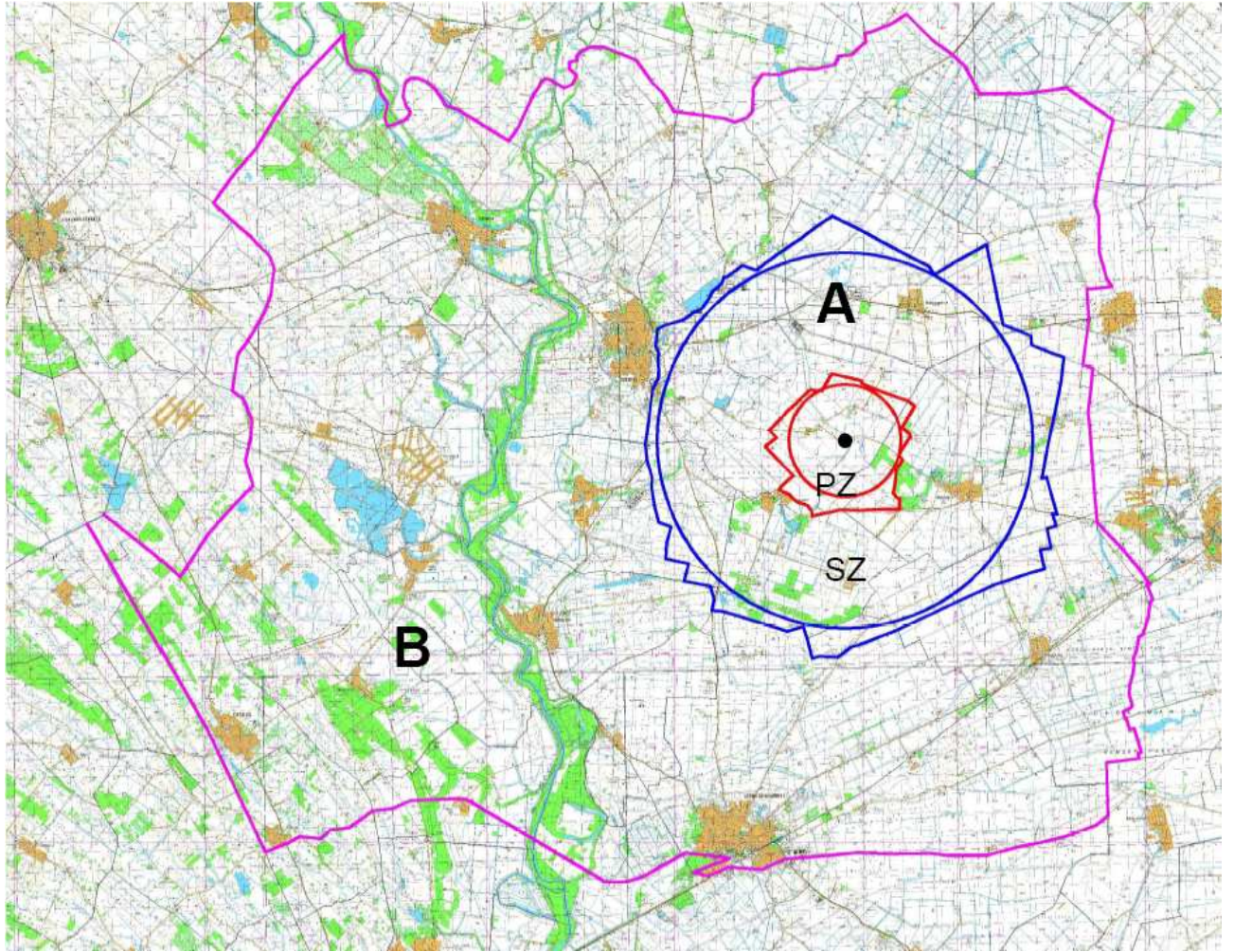
## 24 January

The census in the protection and surveillance zones were finished. The result of the census:

Protection zone	57 backyard flocks	1743 poultry
Surveillance zone	1253 backyard flocks	29590 poultry
	8 large-scale farms	47000 poultry
Total in area A	1318 farms	78333 poultry

The surveillance is ongoing in the area „A”. Since the surveillance had started no other suspect had been found.





## **25 January**

The sampling procedures are starting and ongoing in the area „A”.

The ongoing epidemiological enquiry establishes that on the Kolos-Agro Co Ltd large scale geese farm, as it is a breeding farm, was strictly closed. there was no poultry arriving or leaving the farm within the longest incubation period. The population date was April 2005.

Any other movements were also on the minimal level: only two feed stuff consignment were entered, and no unauthorized person was entered.

## **26 January**

The cleansing and disinfection of the farm was finished.

Suspicion of a new outbreak was established on Szetyán Co Ltd's geese farm after the owner notified the local veterinary officer about rising mortality.

Localisation: Derekegyház-Ördögös N46°32'26"; E20°20'32" (about 9 kms away from the first outbreak point). There were 6.000geese at the age of four weeks and 3.386 geese at the age of eight weeks. At the local investigation there were typical clinical and pathological signs of HPAI.

Samples were sent to the Diagnostic Directorate of the Central Agricultural Office.

## **27 January**

The HPAI suspicion was strengthened.

The stamping out and the rendering of the flock was completed. 6790 geese were destroyed (the rest 2.596 geese died). The preliminary cleansing and disinfection of the farm was initiated after that. There were four backyard flocks in the 1 km zone around the farm. The poultry population (367 poultry) of these farms were destroyed.

The protection and surveillance zones were extended considering to the new outbreak. Registration, census and sampling were ongoing in area “A”. No other suspicion was established.

## **28 January**

The cleansing and disinfection of the farm was ongoing. Registration, census and sampling were ongoing in area “A”. No other suspicion was established.

### **29 January**

The surveillance was ongoing in the territory of the modified area „A”.  
The poultry population of the new enlarged area “A”:

Enlarged area A	2233 backyard flocks	53150 poultry
	14 large-scale farms	124135 poultry
Total	2247 farms	177285 poultry

### **30 January**

The National Reference Laboratory confirmed the second outbreak (in Derekegyház-Ördöngös); the subtype of the virus isolated from first outbreak is confirmed by CRL as H5N1

### **31 January**

The epidemiological status of animals in the surrounding holdings is continuously controlled by the official veterinarians on the basis of laboratory examination. Cleansing and disinfection of the Szetyán Co Ltd. Was completed

### **1 February**

The surveillance was ongoing in the territory of the modified area “A” There are samples sent continuously according to the National Reference Laboratory’s capacities.

There was a serological positive flock detected in the surveillance zone in a big farm with four flocks. The owner of the flocks is Tranzitker Share Company. There are about 4500 breeding geese in the flocks. The production of the flocks is not decreased and also there is no change in the mortality records.

There were further samples sent to the National Reference Laboratory. The examination of the samples is starting on 2<sup>nd</sup> of February.

### **2 February**

The screening was ongoing in the territory of the modified area „A”. During the day there were 263 farm with 2674 poultry checked in 2 settlements.

## **5 February**

The screening was ongoing in the territory of the modified area “A” There are samples sent continuously according to the National Reference Laboratory’s capacities.

On this day there were 171 farms with 2.386 poultry checked.

The Tranzitker Share Company’s flock (just one from the four) proved to be seropositive only.

## **7 February**

During the day –in the interest of maximal biosafety - the above mentioned seropositive flock (720 geese) was destroyed.

## **9-19 February**

During last week no further suspicion of HPAI was established. On 19 February protection zone was lifted. This zone is going to be measured as a surveillance zone.

## **20 February – 5 March**

No further suspicion of HPAI was established. On 5 March surveillance zone was lifted. This zone is going to be measured as area “A”. As Commission Decision 2006/415/EC (as amended by 2007/128/EC) defined the area “A” and “B” and duration of the restrictive measures in the said areas, those measures might be lifted on 12 March 2007.

## **12 March**

As Commission Decision 2006/415/EC (as amended by 2007/128/EC) defined the area “A” and “B” and duration of the restrictive measures in the said areas those measures was lifted today.

## **Part V: International and organizational recognition of Avian Influenza free status of Hungary**

According to the Article 2.7.12.3. of Chapter 2.7.12. on Avian Influenza of the Terrestrial Animal Health Code of the World Organization for Animal Health (OIE), Hungary was declared to regain the HPAI free status on **5<sup>th</sup> of May 2007**. The Final Report submitted to the OIE on 24<sup>th</sup> of May, 2007 (OIE Reference No 5326) is attached separately to this document.

## Part VI: Surveillance results for Avian Influenza for the past 2 years

### 6.1. Surveillance results for the year 2006

The results of the completion of the surveillance program for avian influenza for 2006 are shown in Table I-X. The results concerning to poultry are shown in Table I-VIII. The results concerning to wild birds are shown in Table IX-X (according to the Annual Report on the Avian Influenza Surveillance Programme, Year: 2006).

**TABLE I**  
FINAL REPORT ON SAMPLED POULTRY HOLDINGS \*  
(except ducks and geese)  
**Serological investigation, hens**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.01.2006 to 31.12.2006**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	3	1	0	0	0
Baranya	19	3	0	0	0
Bács-Kiskun	140	11	0	0	0
Békés	36	3	0	0	0
Borsod-Abaúj-Zemplén	58	4	0	0	0
Csongrád	10	1	0	0	0
Fejér	18	1	0	0	0
Győr-Moson-Sopron	39	3	0	0	0
Hajdú-Bihar	43	5	0	0	0
Heves	17	1	0	0	0
Jász-Nagykun-Szolnok	32	3	0	0	0
Komárom-Esztergom	75	6	0	0	0
Nógrád	9	1	0	0	0
Pest	112	9	0	0	0
Somogy	6	1	0	0	0
Szabolcs-Szatmár-Bereg	30	3	0	0	0
Tolna	12	1	0	0	0
Vas	38	5	0	0	0
Veszprém	32	3	0	0	0
Zala	20	2	0	0	0
<b>Total</b>	<b>749</b>	<b>67</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE II: FINAL REPORT ON SAMPLED POULTRY HOLDINGS\* (except ducks and geese)**  
**Serological investigation, turkeys**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.01.2006 to 31.12.2006**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0	0
Baranya	17	5	0	0	0
Bács-Kiskun	27	5	0	0	0
Békés	48	11	0	0	0
Borsod-Abaúj-Zemplén	3	1	0	0	0
Csongrád	50	11	0	0	0
Fejér	1	1	0	0	0
Győr-Moson-Sopron	32	7	0	0	0
Hajdú-Bihar	15	3	0	0	0
Heves	7	1	0	0	0
Jász-Nagykun-Szolnok	20	3	0	0	0
Komárom-Esztergom	3	2	0	0	0
Nógrád	0	0	0	0	0
Pest	3	1	0	0	0
Somogy	31	6	0	0	0
Szabolcs-Szatmár-Bereg	10	3	0	0	0
Tolna	8	1	0	0	0
Vas	81	19	0	0	0
Veszprém	23	5	0	0	0
Zala	28	6	0	0	0
<b>Total</b>	<b>407</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE III: FINAL REPORT ON SAMPLED POULTRY HOLDINGS\*** (except ducks and geese)**Serological investigation, other poultry**Member State: **HUNGARY**Date: **26.03.2007.**Reporting period from: **01.01.2006 to 31.12.2006**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	1	0	0	0	0
Baranya	2	1	0	0	0
Bács-Kiskun	43	21	0	0	0
Békés	2	2	0	0	0
Borsod-Abaúj-Zemplén	3	1	0	0	0
Csongrád	2	0	0	0	0
Fejér	3	1	0	0	0
Győr-Moson-Sopron	3	1	0	0	0
Hajdú-Bihar	6	3	0	0	0
Heves	8	3	0	0	0
Jász-Nagykun-Szolnok	0	0	0	0	0
Komárom-Esztergom	3	2	0	0	0
Nógrád	11	4	0	0	0
Pest	3	1	0	0	0
Somogy	3	1	0	0	0
Szabolcs-Szatmár-Bereg	11	6	0	0	0
Tolna	8	3	0	0	0
Vas	1	1	0	0	0
Veszprém	2	1	0	0	0
Zala	4	1	0	0	0
<b>Total</b>	<b>119</b>	<b>53</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC



**TABLE IV: FINAL REPORT ON DATA DUCK AND GEESE HOLDINGS\***  
**Serological investigation**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.01.2006 to 31.12.2006**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0	0
Baranya	3	2	0	0	0
Bács-Kiskun	454	95	0	0	0
Békés	76	19	0	0	0
Borsod-Abaúj-Zemplén	1	1	0	0	0
Csongrád	130	26	0	0	0
Fejér	0	0	0	0	0
Győr-Moson-Sopron	3	1	0	0	0
Hajdú-Bihar	63	13	0	0	0
Heves	3	1	0	0	0
Jász-Nagykun-Szolnok	29	6	0	0	0
Komárom-Esztergom	7	2	0	0	0
Nógrád	3	1	0	0	0
Pest	10	4	0	0	0
Somogy	0	0	0	0	0
Szabolcs-Szatmár-Bereg	16	2	0	0	0
Tolna	1	1	0	0	0
Vas	1	0	0	0	0
Veszprém	0	0	0	0	0
Zala	0	0	0	0	0
<b>Total</b>	<b>800</b>	<b>174</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex III of the Commission Decision 2006/314/EC

**TABLE V: FINAL REPORT ON SAMPLED POULTRY BACKYARD HOLDINGS\*** (except ducks and geese)

**RT-PCR investigation, hens**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0
Baranya	18	0	0	0
Bács-Kiskun	58	0	0	0
Békés	18	0	0	0
Borsod-Abaúj-Zemplén	76	0	0	0
Csongrád	36	0	0	0
Fejér	54	0	0	0
Győr-Moson-Sopron	30	0	0	0
Hajdú-Bihar	25	0	0	0
Heves	5	0	0	0
Jász-Nagykun-Szolnok	14	0	0	0
Komárom-Esztergom	22	0	0	0
Nógrád	34	0	0	0
Pest	23	0	0	0
Somogy	70	0	0	0
Szabolcs-Szatmár-Bereg	152	0	0	0
Tolna	44	0	0	0
Vas	0	0	0	0
Veszprém	95	0	0	0
Zala	62	0	0	0
<b>Total</b>	<b>836</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE VI: FINAL REPORT ON SAMPLED POULTRY BACKYARD HOLDINGS\*** (except ducks and geese)

**RT-PCR investigation, turkeys**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0
Baranya	8	0	0	0
Bács-Kiskun	14	0	0	0
Békés	4	0	0	0
Borsod-Abaúj-Zemplén	8	0	0	0
Csongrád	14	0	0	0
Fejér	22	0	0	0
Győr-Moson-Sopron	1	0	0	0
Hajdú-Bihar	11	0	0	0
Heves	0	0	0	0
Jász-Nagykun-Szolnok	5	0	0	0
Komárom-Esztergom	6	0	0	0
Nógrád	13	0	0	0
Pest	2	0	0	0
Somogy	11	0	0	0
Szabolcs-Szatmár-Bereg	79	0	0	0
Tolna	7	0	0	0
Vas	0	0	0	0
Veszprém	25	0	0	0
Zala	2	0	0	0
<b>Total</b>	<b>232</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE VII: FINAL REPORT ON SAMPLED POULTRY BACKYARD HOLDINGS\*** (except ducks and geese)

**RT-PCR investigation, others**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0
Baranya	10	0	0	0
Bács-Kiskun	37	0	0	0
Békés	10	0	0	0
Borsod-Abaúj-Zemplén	48	0	0	0
Csongrád	23	0	0	0
Fejér	26	0	0	0
Győr-Moson-Sopron	19	0	0	0
Hajdú-Bihar	14	0	0	0
Heves	2	0	0	0
Jász-Nagykun-Szolnok	10	0	0	0
Komárom-Esztergom	13	0	0	0
Nógrád	20	0	0	0
Pest	4	0	0	0
Somogy	17	0	0	0
Szabolcs-Szatmár-Bereg	63	0	0	0
Tolna	37	0	0	0
Vas	0	0	0	0
Veszprém	31	0	0	0
Zala	2	0	0	0
<b>Total</b>	<b>386</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE VIII: FINAL REPORT ON SAMPLED POULTRY BACKYARD HOLDINGS\***  
**RT-PCR investigation, duck and geese**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Budapest	0	0	0	0
Baranya	17	0	0	0
Bács-Kiskun	64	0	0	0
Békés	18	0	0	0
Borsod-Abaúj-Zemplén	81	0	0	0
Csongrád	36	0	0	0
Fejér	56	0	0	0
Győr-Moson-Sopron	27	0	0	0
Hajdú-Bihar	27	0	0	0
Heves	8	0	0	0
Jász-Nagykun-Szolnok	14	0	0	0
Komárom-Esztergom	25	0	0	0
Nógrád	41	0	0	0
Pest	26	0	0	0
Somogy	72	0	0	0
Szabolcs-Szatmár-Bereg	171	0	0	0
Tolna	45	0	0	0
Vas	0	0	0	0
Veszprém	92	0	0	0
Zala	20	0	0	0
<b>Total</b>	<b>840</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* According to the Annex II of the Commission Decision 2006/314/EC

**TABLE IX: FINAL REPORT ON DATA ON WILD BIRDS\***  
**RT-PCR investigation**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Species of wild birds sampled	Total number of samples taken for examination	Total number of positive samples	Number of positive samples for subtype H5	Number of positive samples for subtype H7
Budapest	47	1052	0	0	0
Baranya	5	82	2	2	0
Bács-Kiskun	50	433	56	56	0
Békés	12	29	0	0	0
Borsod-Abaúj-Zemplén	7	46	0	0	0
Csongrád	29	215	0	0	0
Fejér	29	202	0	0	0
Győr-Moson-Sopron	3	15	0	0	0
Hajdú-Bihar	3	175	0	0	0
Heves	29	256	0	0	0
Jász-Nagykun-Szolnok	20	125	0	0	0
Komárom-Esztergom	24	266	0	0	0
Nógrád	24	126	0	0	0
Pest	47	299	5	5	0
Somogy	6	20	0	0	0
Szabolcs-Szatmár-Bereg	5	107	0	0	0
Tolna	6	104	1	1	0
Vas	4	58	0	0	0
Veszprém	40	171	0	0	0
Zala	8	121	0	0	0
<b>Total</b>	<b>398</b>	<b>3902</b>	<b>64</b>	<b>64</b>	<b>0</b>

\* According to the Annex IV of the Commission Decision 2006/314/EC

**TABLE X: FINAL REPORT ON DATA ON WILD BIRDS\***  
**Virus isolation**

Member State: **HUNGARY**

Date: **26.03.2007.**

Reporting period from: **01.02.2006 to 31.12.2006**

Region	Species of wild birds sampled	Total number of samples taken for examination	Total number of positive samples	Number of positive samples for subtype H5	Number of positive samples for subtype H7
Budapest	46	1052	0	0	0
Baranya	5	38	2	2	0
Bács-Kiskun	39	375	56	56	0
Békés	10	19	0	0	0
Borsod-Abaúj-Zemplén	0	0	0	0	0
Csongrád	28	104	0	0	0
Fejér	26	83	0	0	0
Győr-Moson-Sopron	2	5	0	0	0
Hajdú-Bihar	0	0	0	0	0
Heves	29	135	0	0	0
Jász-Nagykun-Szolnok	17	50	0	0	0
Komárom-Esztergom	10	34	0	0	0
Nógrád	23	56	0	0	0
Pest	35	159	5	5	0
Somogy	4	11	0	0	0
Szabolcs-Szatmár-Bereg	0	0	0	0	0
Tolna	5	6	1	1	0
Vas	7	19	0	0	0
Veszprém	38	143	0	0	0
Zala	5	32	0	0	0
<b>Total</b>	<b>329</b>	<b>2321</b>	<b>64</b>	<b>64</b>	<b>0</b>

\* According to the Annex IV of the Commission Decision 2006/314/EC

## 6.2. Surveillance results for the year 2007

The results of the completion of the surveillance program for avian influenza for 2007 are shown in Table XI-XXIV. The results concerning to poultry are shown in Table XI-XXII. The results concerning to wild birds are shown in Table XXIII-XXIV (according to the Annual Report on the Avian Influenza Surveillance Programme, Year: 2007).

**TABLE XI**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, hens (laying hens and free range laying hens)**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	62	11	0	0	0
Fejér	18	2	0	0	0
Komárom-Esztergom	36	1	0	0	0
Veszprém	38	11	0	0	0
Győr-Moson-Sopron	25	2	0	0	0
Vas	26	1	0	0	0
Zala	8	3	0	0	0
Baranya	10	1	0	0	0
Somogy	3	1	0	0	0
Tolna	6	2	0	0	0
Borsod-Abaúj-Zemplén	39	4	0	0	0
Heves	19	0	0	0	0
Nógrád	9	0	0	0	0
Hajdú-Bihar	69	2	0	0	0
Jász-Nagykun-Szolnok	12	0	0	0	0
Szabolcs-Szatmár-Bereg	14	2	0	0	0
Bács-Kiskun	28	8	0	0	0
Békés	31	6	0	0	0
Csongrád	97	97	0	0	0
<b>Total</b>	<b>550</b>	<b>154</b>	<b>0</b>	<b>0</b>	<b>0</b>



**TABLE XII**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, chicken breeders**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	12	9	0	0	0
Komárom-Esztergom	24	1	0	0	0
Veszprém	15	1	0	0	0
Győr-Moson-Sopron	4	4	0	0	0
Vas	11	4	0	0	0
Zala	10	2	0	0	0
Baranya	7	2	0	0	0
Somogy	1	1	0	0	0
Borsod-Abaúj-Zemplén	4	3	0	0	0
Heves	2	2	0	0	0
Hajdú-Bihar	10	4	0	0	0
Jász-Nagykun-Szolnok	6	2	0	0	0
Szabolcs-Szatmár-Bereg	12	1	0	0	0
Bács-Kiskun	2	2	0	0	0
Békés	1	1	0	0	0
<b>Total</b>	<b>121</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XIII**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, fattening turkeys**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	2	2	0	0	0
Fejér	1	1	0	0	0
Komárom-Esztergom	3	2	0	0	0
Veszprém	16	9	0	0	0
Győr-Moson-Sopron	29	8	0	0	0
Vas	82	34	0	0	0
Zala	48	9	0	0	0
Baranya	8	3	0	0	0
Somogy	25	13	0	0	0
Tolna	6	2	0	0	0
Borsod-Abaúj-Zemplén	3	2	0	0	0
Heves	2	1	0	0	0
Nógrád	1	1	0	0	0
Hajdú-Bihar	11	5	0	0	0
Jász-Nagykun-Szolnok	19	4	0	0	0
Szabolcs-Szatmár-Bereg	4	2	0	0	0
Bács-Kiskun	20	8	0	0	0
Békés	58	7	0	0	0
Csongrád	31	16	0	0	0
<b>Total</b>	<b>369</b>	<b>129</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XIV**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, turkey breeders**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Vas	2	2	0	0	0
Heves	2	2	0	0	0
Jász-Nagykun-Szolnok	1	1	0	0	0
Békés	3	3	0	0	0
<b>Total</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XV**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, breeder ducks**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Baranya	6	2	0	0	0
Borsod-Abaúj-Zemplén	1	1	0	0	0
Bács-Kiskun	16	8	0	0	0
Békés	1	1	0	0	0
<b>Total</b>	<b>24</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XVI**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, fattening ducks**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	19	6	0	0	0
Komárom-Esztergom	2	2	0	0	0
Hajdú-Bihar	1	1	0	0	0
Jász-Nagykun-Szolnok	11	4	0	0	0
Bács-Kiskun	273	57	0	0	0
Békés	30	11	0	0	0
Csongrád	45	44	0	0	0
<b>Total</b>	<b>381</b>	<b>125</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XVII**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, breeder geese**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	1	1	0	0	0
Komárom-Esztergom	3	1	0	0	0
Heves	2	2	0	0	0
Nógrád	6	2	0	0	0
Jász-Nagykun-Szolnok	2	1	0	0	0
Bács-Kiskun	12	6	0	0	0
Békés	2	1	0	0	0
Csongrád	2	2	0	0	0
<b>Total</b>	<b>30</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XVIII**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, fattening geese**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	19	14	0	0	0
Komárom-Esztergom	3	3	0	0	0
Győr-Moson-Sopron	3	2	0	0	0
Baranya	1	1	0	0	0
Heves	1	1	0	0	0
Nógrád	1	1	0	0	0
Hajdú-Bihar	53	19	0	0	0
Jász-Nagykun-Szolnok	27	8	0	0	0
Szabolcs-Szatmár-Bereg	24	8	0	0	0
Bács-Kiskun	273	52	0	0	0
Békés	154	34	0	0	0
Csongrád	43	43	0	0	0
<b>Total</b>	<b>602</b>	<b>186</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XIX**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, farmed game birds**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	1	1	0	0	0
Fejér	2	2	0	0	0
Veszprém	2	2	0	0	0
Győr-Moson-Sopron	2	2	0	0	0
Vas	1	1	0	0	0
Somogy	1	1	0	0	0
Tolna	4	4	0	0	0
Borsod-Abaúj-Zemplén	2	2	0	0	0
Heves	3	3	0	0	0
Szabolcs-Szatmár-Bereg	5	5	0	0	0
Bács-Kiskun	2	1	0	0	0
Békés	4	2	0	0	0
Csongrád	1	1	0	0	0
<b>Total</b>	<b>30</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XX**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, ratites**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Zala	2	2	0	0	0
Tolna	1	1	0	0	0
Heves	2	2	0	0	0
Hajdú-Bihar	4	2	0	0	0
Szabolcs-Szatmár-Bereg	1	1	0	0	0
Csongrád	1	1	0	0	0
<b>Total</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XXI**  
**FINAL REPORT ON SAMPLED POULTRY HOLDINGS**  
**Serological investigation, others**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	1	1	0	0	0
Veszprém	1	1	0	0	0
Zala	1	1	0	0	0
Heves	2	2	0	0	0
Hajdú-Bihar	1	1	0	0	0
Bács-Kiskun	7	7	0	0	0
Csongrád	2	2	0	0	0
<b>Total</b>	<b>15</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XXII**  
**FINAL REPORT ON SAMPLED POULTRY BACKYARD FLOCKS**  
**(hen, duck, goose, guinea-fowl, turkey)**  
**RT-PCR investigation**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Total number of holdings sampled	Total number of positive holdings	Number of positive holdings for subtype H5	Number of positive holdings for subtype H7
Pest (including Budapest)	102	0	0	0
Fejér	95	0	0	0
Komárom-Esztergom	75	0	0	0
Veszprém	184	0	0	0
Győr-Moson-Sopron	89	0	0	0
Vas	66	0	0	0
Zala	58	0	0	0
Baranya	72	0	0	0
Somogy	153	0	0	0
Tolna	99	0	0	0
Borsod-Abaúj-Zemplén	116	0	0	0
Heves	58	0	0	0
Nógrád	133	0	0	0
Hajdú-Bihar	50	0	0	0
Jász-Nagykun-Szolnok	82	0	0	0
Szabolcs-Szatmár-Bereg	199	0	0	0
Bács-Kiskun	106	0	0	0
Békés	51	0	0	0
Csongrád	109	0	0	0
<b>Total</b>	<b>1897</b>	<b>0</b>	<b>0</b>	<b>0</b>

**TABLE XXIII**  
**FINAL REPORT ON DATA ON WILD BIRDS**  
**RT-PCR investigation**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Species of wild birds sampled	Total number of samples taken for examination	Total number of positive samples	Number of positive samples for subtype H5	Number of positive samples for subtype H7
Pest (including Budapest)	12	114	0	0	0
Fejér	21	193	0	0	0
Komárom-Esztergom	6	122	0	0	0
Veszprém	10	75	1	0	1
Győr-Moson-Sopron	4	172	0	0	0
Vas	15	148	0	0	0
Zala	6	156	0	0	0
Baranya	6	60	0	0	0
Somogy	8	298	0	0	0
Tolna	1	102	0	0	0
Borsod-Abaúj-Zemplén	23	77	0	0	0
Heves	9	108	0	0	0
Nógrád	6	53	0	0	0
Hajdú-Bihar	2	170	0	0	0
Jász-Nagykun-Szolnok	10	144	0	0	0
Szabolcs-Szatmár-Bereg	7	225	0	0	0
Bács-Kiskun	17	211	0	0	0
Békés	8	30	0	0	0
Csongrád	9	343	0	0	0
<b>Total</b>		<b>2801</b>	<b>1</b>	<b>0</b>	<b>1</b>

**TABLE XXIV**  
**FINAL REPORT ON DATA ON WILD BIRDS**  
**Virus isolation**

Member State: **HUNGARY**

Date: **29 May 2008**

Reporting period from: **01.01.2007 to 31.12.2007**

Region	Species of wild birds sampled	Total number of samples taken for examination	Total number of positive samples	Number of positive samples for subtype H5	Number of positive samples for subtype H7
Pest (including Budapest)	9	21	0	0	0
Fejér	4	8	0	0	0
Komárom-Esztergom	0	0	0	0	0
Veszprém	4	9	1	0	1
Győr-Moson-Sopron	0	0	0	0	0
Vas	3	7	0	0	0
Zala	1	2	0	0	0
Baranya	1	1	0	0	0
Somogy	12	40	0	0	0
Tolna	1	1	0	0	0
Borsod-Abaúj-Zemplén	5	14	0	0	0
Heves	5	5	0	0	0
Nógrád	3	3	0	0	0
Hajdú-Bihar	2	4	0	0	0
Jász-Nagykun-Szolnok	8	41	0	0	0
Szabolcs-Szatmár-Bereg	8	11	0	0	0
Bács-Kiskun	11	16	0	0	0
Békés	4	7	0	0	0
Csongrád	8	17	0	0	0
<b>Total</b>		<b>207</b>	<b>1</b>	<b>0</b>	<b>1</b>